Purpose of this report

The purpose of this report is to provide feedback to the pediatric endocrinology community regarding content areas of strength and weakness, information which may be useful for identifying potential gaps in knowledge and guiding the development of educational materials. Using data from the American Board of Pediatrics’ (ABP) Maintenance of Certification Assessment for Pediatrics (MOCA-Peds), this report summarizes diplomate performance on the questions within each of the 47 content areas assessed in 2022.

MOCA-Peds content areas

In 2022, MOCA-Peds—Pediatric Endocrinology consisted of questions from a total of 47 content areas, broken down as follows:

- **45 learning objectives** — Each diplomate initially received one question from each of the 45 specific content areas drawn from the pediatric endocrinology content outline.

- **Two featured readings** — Each diplomate also received two questions per featured reading (e.g., clinical guidelines, journal articles) for a total of four featured reading questions.

A pool of questions was developed for each learning objective and for each featured reading. Questions were then drawn from the pool and administered to diplomates throughout 2022 according to the specifications described in the bulleted list above.

Understanding this report

This report provides a graphical summary of diplomate performance on each of the 47 content areas assessed in 2022. Within the graphic and in the example below, the point (•) reflects the average percent correct for all questions within that learning objective or featured reading. The bar (—) reflects the range of percent correct values for the questions within that learning objective or featured reading. More specifically, the bar’s lower endpoint indicates the most difficult question (i.e., answered correctly by the lowest percentage of diplomates) and the bar’s upper endpoint indicates the easiest question (i.e., answered correctly by the highest percentage of diplomates).

![Learning Objective Example](image)

1. Distinguish constitutional delay of puberty from hypogonadotropic hypogonadism.

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3 Each diplomate also received 15 “repeat” questions selected from their original subset of learning objective and featured reading questions. Performance on the repeat administrations is not included in this report.
A note of caution

Many factors (eg, specific content of the question, wording of the question, plausibility of the incorrect answers) can impact diplomate performance on any question. It is thus difficult to determine if poor performance on a single question, or small set of questions, within a given content area reflects a true gap in diplomate knowledge or if the question(s) associated with that content area were difficult for other reasons (or some combination of both). Collectively, the entire set of MOCA-Peds questions (across all content areas) constitutes a psychometrically valid assessment of the diplomate’s overall level of knowledge. Performance within a given content area is based on fewer questions, however, and is therefore less useful for making inferences about diplomate knowledge in that specific content area.

It is important to note again that for security reasons, a pool of questions was developed for each content area so that each diplomate received a unique set of questions. In addition, the number of questions can vary from one content area to the next. In cases where a content area had a relatively large pool of questions, the number of diplomates who answered each question was reduced, which diminished the statistical precision of each question’s percent correct value. In cases where a content area had a relatively small number of questions, each question was answered by a larger number of diplomates, but the overall breadth of the content being assessed within that content area was constrained, which limits the generalizability of the results.

In other words, MOCA-Peds was designed to assess individual diplomates with respect to their overall level of knowledge in pediatric endocrinology. It was not designed to provide the pediatric community with diagnostic feedback pertaining to specific content areas within pediatric endocrinology. The results within this report may be informative and useful for that secondary purpose, but they should be interpreted with a degree of caution.

Additional notes

- To protect the security of the content of the assessment, the questions themselves, along with information about the number of questions in the pool for any particular learning objective or featured reading, are not provided in this report.

- This report contains data aggregated across many diplomates participating in the MOCA-Peds program and cannot be used to make inferences or draw conclusions regarding any particular diplomate.
Distinguish constitutional delay of puberty from hypogonadotropic hypogonadism.

Appreciate the pattern of growth hormone (GH) secretion in psychosocial deprivation.

Incorporate new advances in the management of adrenoleukodystrophy.

Evaluate patients with DAX1 mutation.

Recognize the relative androgenicity of different progestin preparations in oral contraceptive pills (OCPs).

ASMBMS pediatric metabolic and bariatric surgery guidelines, 2018 (Featured Reading)

The Clinical Spectrum of McCune−Albright Syndrome and Its Management (Featured Reading)

Recognize the role of adrenocorticotropic hormone (ACTH) in aldosterone secretion.

Distinguish various causes of neonatal hypercalcemia.

Distinguish familial hyperthyroxinemic dysalbuminemia from thyrotoxicosis.

Identify risk factors for vitamin D deficiency.

Calculate and interpret sensitivity and specificity.

Recognize the endocrine response to fasting.

Interpret mean and standard deviation in normally distributed data sets.

Describe the clinical phenotype of growth hormone (GH) resistance syndromes.

Recognize the risk factors for cerebral edema in diabetic ketoacidosis.

Differentiate clinical syndromes associated with serotonin versus vasoactive intestinal polypeptide (VIP) excess.

Differentiate between Cushing disease and ectopic adrenocorticotropic (ACTH) production.

Predict the most common cognitive deficit in Klinefelter syndrome.

Determine the indications for drug treatment of elevated low−density lipoprotein (LDL) cholesterol in diabetes.

Diagnose a patient with insulin−like growth factor−1 (IGF−1) resistance.

Recommend the timing of thyroidectomy in a child with multiple endocrine neoplasia (MEN)2.

Manage a child with hypoparathyroidism.

Describe phenotypic consequences of translocation of SRY.

Know the medications that cause syndrome of inappropriate antidiuretic hormone (SIADH).

Distinguish familial hypercholesterolemia from dyslipidemia associated with obesity.

Describe the effect of altered binding proteins on the direct free thyroxine assay.

Evaluate disorders of testosterone biosynthesis.

Identify how age and sex affect circulating insulin−like growth factor−1 (IGF−1) levels.

Identify the endocrine presentations of autoimmune polyendocrinopathy syndrome type 1.

Recognize the indications for SHOX gene testing.

Recognize the risk of associated autoimmune diseases in a child with type 1 diabetes.

Identify risk factors for iodine deficiency as an etiology of hypothyroidism.

Recognize the fetal complications of maternal type 1 diabetes.

Describe the role of G−protein signaling defects in endocrine disorders.

Differentiate the effect of various gonadal steroids on sex hormone−binding globulin (SHBG).

Assess the incidence of complications in type 1 versus type 2 diabetes.

Describe the effects of steroid excess on the growth hormone−insulin−like growth factor−1 (GH−IGF−1) axis.

Appraise the use of glucagon for the diagnosis of hyperinsulinemic hypoglycemia.

Distinguish various causes of hypophosphatemia.

Recognize different causes of acquired primary adrenal insufficiency.

Evaluate the pitfalls of insulin−like growth factor−1 (IGF−1) measurement in nutritional deficiency.

Recognize the action profile of insulin analogues.

Assess the effect of stress on the hypothalamic−pituitary−adrenal (HPA) axis.

Manage a patient with euthyroid goiter.

Distinguish constitutional delay from growth disorders.

Describe the potential adverse consequences of methimazole treatment.

Sample: Included in the sample were all diplomates who have answered at least one question in 2022 (N = 811).